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Family with Charcot-Marie-Tooth. Pedobarogramme's findings and treatment

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E-mail address: nice@otenet.gr.**Keywords:** Charcot-Marie-Tooth; Pedobarogramme; Gait analysis**Introduction.**– Charcot-Marie-Tooth (CMT) is an inherited demyelinating disease of the peripheral nervous system characterized by muscle weakness and changes in mechanical properties of the foot. The implications in the foot are due to muscle atrophy in peronei muscles. The prevalence of the disease is 30/100,000. The evolution is very slow and the life expectancy is almost normal. The deformities in combination with sensory deficits renders imperative the use of costumed insoles preceded by a diagnostic pedobarogramme.**Material and method:** Five members of a family were studied, all of them suffered from CMT. Two women, 63 and 58 years old, their brother, 61 years old, and the women's sons, 40 and 35 years old respectively. Static and dynamic pedobarogramme tests were conducted and followed by photographic scanning of the data of every patient.**Results.**– All the patients had findings of cavus foot associated by hyperkeratosis underneath the heads of metatarsal bones and especially in the skin under the fifth metatarsal bone. The 63-year-old woman had developed ulcerations and she was lean on the anterior part of the foot. Four out of five patients experienced complete loss of foot arch to one or both feet. In dynamic pedobarogramme, the three older patients revealed shortening of the gait and pronounced imbalance. All the patients' gait was characterized by transmission of the ground reaction force through the inner line of the plantar print. During gait there was great loading mainly in the first and fifth metatarsal bone. All the patients were prescribed insoles after pedobarogramme.**Outcome.**– All the patients had significant improvement regarding pain during walking. The three older-aged patients increased the length of their gait and their speed during walking. Taking into consideration the above we came to conclusion that the earlier use of insoles improves the quality of gait cycle and renders walking less painful and more functioning.<http://dx.doi.org/10.1016/j.rehab.2012.07.235>

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Interest of plantar orthoses in the rheumatoid foot: Prospective study in a Moroccan population

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E-mail address: hanane-508@hotmail.fr.**Keywords:** Rheumatoid foot; Plantar orthoses**Objectives.**– The assessment of the deformation of the feet in Moroccan patients with rheumatoid arthritis, the prescription of foot orthoses and evaluation of their effectiveness in a prospective study.**Material and methods.**– Fifty-three patients were included in this study. Studied parameters were: age, sex, duration of evolution, the RA activity (DAS28) and pharmacological treatments. To assess the achievement of the foot pain, Foot Function Index, EVA and foot review were assessed. The prescription of foot orthoses and assessing their effectiveness after 3 months.**Results.**– The average age of patients was 49, 18 ± 10 , 80 years and the evolution of the RA was 10, 25 ± 6 , 02 years. Thirty-six patients (67.9%) had a metatarsalgia, 13 patients (24.5%) had a talalgia, the average of EVA was 50, 37 ± 10 , 54 mm, clutch problems were found in 37.5% of the patients and 42% had a gait walking. The FFI was 67, 78 ± 15 , 36 indicating a functional impact. Foot examination indicated an infringement of the forefoot in 75% of the patients, 37.5% had an infringement of the mid foot and 31.2% had an

infringement of the hind foot. Plantar orthoses has been prescribed for patients with a metatarsalgia (67, 9%), and patients with a talalgia, and orthoplasty were prescribed in 12 patients (22.6%).

After 3 months, the average pain EVA rose to 38, 25 ± 9 , 63 ($P = 0, 009$) and the FFI: 45, 19 ± 12 , 56 ($P = 0, 011$) indicating the effectiveness of orthoses in our patients. Satisfaction assessed by YES/NO three months after was positive in 49% of the patients.**Conclusion.**– Plantar orthoses had helped to reduce the pain of the foot and the functional gait in our RA patients. It seems necessary to provide for their limitation in the management of this chronic rheumatism in our sick routine.<http://dx.doi.org/10.1016/j.rehab.2012.07.236>

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Combat mangled foot: Amputation versus conservative treatment. Case report and discussion

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E-mail address: stephanie.truffaut@gmail.com.**Keywords:** War injuries; Amputation; Conservative surgery; Quality of life; Rehabilitation

We report a case of a 23-year-old French soldier, victim of polytrauma with both lower limbs injuries, by landmine explosion in April 2011 in Afghanistan. Assessment of the lesions observed: right tibia/fibula burst fracture, and calcaneus, metatarsal fractures; left foot was mangled, with calcaneal fracture, transcalcaneal talonavicular dislocation and multiple metatarsal fractures. The initial surgical treatment, conservative, combined right tibial external fixation, and left tibial stabilisation bar, calcaneal metacarpal pin fixation.

Left lower limb evolution was characterized by a compartment syndrome, osteitis and partial calcaneus and skin graft necrosis. A vertical calcaneal splinter, and neuropathic pain appeared, impeding ambulation and rehabilitation.

Five month post-trauma, left foot suffers infectious, orthopedic, neurological and arteriopathic complications, leading to consider the failure of conservative treatment. After multidisciplinary discussion, amputation is proposed. The patient chose conservative treatment. Calcanectomy is performed. One-year post-trauma, the patient is able to walk with orthopaedic footwear.

According to the literature, amputation indication had to be discussed since first surgery, as mangled foot is Gustilio-type IIIC [1,2], despite no validated predictive score exists [2,3]. Secondary amputation could be a satisfactory solution in terms of pain and function [4]. Quality of life after amputation or conservative treatment has been evaluated with meta-analysis, thanks to generic scores (SF36, SIP) [5]. Reconstruction is more acceptable psychologically to patients with severe lower limb trauma compared with amputation, though physical outcomes were similar.

Mangled foot rehabilitation phase is a key step time, in which secondary amputation is discussed on an ad hoc basis.

References

- [1] Caudle RJ, Stern PJ. Severe open fractures of the tibia. J Bone Joint Surg 1987;69:801–7.
- [2] Bonanni F, et al. The futility of predictive scoring of mangled lower extremities. J Trauma 1993;34:99–104.
- [3] Bosse MJ, et al. A prospective evaluation of the clinical utility of the lower-extremity injury severity scores. J Bone Joint Surg Am 2001;83:3–14.
- [4] Ferguson J, et al. Recent advances in lower extremity amputations and prosthetics for the combat injured patient. Foot Ankle Clin 2010;15(1):151–74.
- [5] Maheswara A, et al. A meta-analysis of amputation versus limb salvage in mangled lower limb injuries. The patient perspective. Injury 2011;42(11):1194–7.

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